

Performance

A fiber-coupled diode laser with 140 W laser power offers optimal conditions for processing various metal materials such as stainless steel, tool steel, nickel-based alloys or aluminum alloys². The focus diameter of 140 µm allows the production of finest details and thin wall thicknesses. Layer thicknesses between 30 µm and 90 µm and the freely adjustable process parameters allow a component and material-optimized production process.

Low investment costs

Simple, economical, flexible – the Alpha 140 is the ideal entry-level product for the additive manufacturing of metal components. It dispenses with costly and maintenance-prone components and, thanks to its newly designed machine design, is up to 80 % more economical than other laser powder bed fusion machines. The wide range of usable metal materials offers high flexibility and a variety of applications.



Consulting and training

Through the close cooperation of the Laser Melting Innovations GmbH, the Aachen Center for Additive Manufacturing, the RWTH Aachen, the Fraunhofer Institute for Laser Technology and Kurtz Ersä, a broadly based consulting approach as well as training in all areas of additive manufacturing is ensured.



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ADDITIVE MANUFACTURING.

DRIVEN BY KURTZ ERSA.

KURTZ ERSA ALPHA 140

The ideal introduction to 3D printing

The Alpha 140 combines innovative additive manufacturing technology with particularly simple operation at low system costs. The Alpha 140 offers an optimal solution for the tool-free production of metal parts, especially for small and medium-sized companies.



„The Alpha 140 is sold worldwide through the Kurtz Ersa distribution network. This guarantees our customers the best service – fast and directly on site.“

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Technical specifications¹:

General

build value	Ø 140 mm x Z 200 mm	
shield gas input (Argon)	6 bar	
shield gas consumption (Argon)	flooding	40 l / min
	process	6 l / min
	job Ø	10 l / min
layer height	30 – 90 µm	

Laser and Optic

laser	fibre coupled diode laser 140 W / aircooled	
wavelength	915 nm	
focus diameter	140 µm	

Electronics

electrical input	230 V 50 Hz, max. 16 A Pmax = 3 kW, single-phase	
IP protection class	IP54	
environment temperature	15 – 35 °C	
air humidity	max. 70 %	

Materials

materials	■ stainless steels 1.4404
	■ nickel-based alloys IN625 or IN7188
	■ aluminum alloys ²
	■ tool steel alloys 1.2709
	■ others on request
part density	up to 99,9 %
geometric accuracy (xy)	up to 100 µm

Dimensions

dimensions (L x B x H)	1,675 mm x 920 mm x 1,508 mm
weight	ca. 500 kg ~ 1,100 lbs

Software

LMI Slice AM

¹subject to technical change without notice
²optional accessories necessary

